Docket H10167AJA
Customer No. 01333

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	Group Art Unit: 3726
Jerry A. Pickering, et al	Examiner: Sarang Afzali
FUSER MEMBER AND FUSER MEMBER SURFACE LAYER	Confirmation No. 7165
Serial No. 10/691,778	
Filed 23 October 2003	

Mail Stop APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA. 22313-1450

Sir:

APPEAL BRIEF PURSUANT TO 37 C.F.R. 41.37 and 35 U.S.C. 134

Table Of Contents

APPELLANT'S BRIEF ON APPEAL

Appellants hereby appeal to the Board of Patent Appeals and Interferences from the Examiner's Final Rejection of claims 64, 65, 69, 70, 86, and 87 which was contained in the Office Action mailed August 12, 2008.

A timely Notice of Appeal was filed December 11, 2008.

Real Party In Interest

Eastman Kodak Company is the assignee and the real party in interest.

Related Appeals And Interferences

No appeals or interferences are known which will directly affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

Status Of The Claims

Claims 64, 65, 69, 70, 86 and 87 are rejected, and appealed.

Claims 66, 71, 80, and 81 are canceled.

Claims 1-63, 67, 68, 72-79, 82-85 and 88 are withdrawn.

Appendix I provides a clean, double spaced copy of the claims on appeal.

Status Of Amendments

No amendments have been requested subsequent to the final rejection.

Summary of Claimed Subject Matter

Independent claim 64 is directed toward a fuser member (10) for a toner fusing system (Fig. 1) or process comprising: (a) a base (11) (pages 28-29, paragraphs [084]-[088]); and (b) a fusing surface layer (13) comprising: (i) a fluoroelastomer (pages 33-35, paragraphs [0109]-[0117]); and (ii) filler particles (27) comprising polytetrafluoroethylene filler particles (paragraph [0187]), with a

modulus (paragraph [032]) greater than the modulus of the fluoroelastomer (paragraph [035]) at the fusing temperature (paragraph [036]), and with a mean particle diameter of at least about 50 microns (Examples 5 and 6, Table 2, paragraph [0232]), in at least the minimum proportion by volume of the fusing surface layer (paragraphs [051], [054]), and with at least the minimum mean particle diameter (paragraph [050]), so that, in fusing toner to substrate, the fuser member generates an image having a gloss number of about 5 or less (paragraphs [050]).

Grounds of Rejection to be Reviewed on Appeal

The following issues are presented for review by the Board of Patent Appeals and Interferences:

1. Claims 64, 65, 69, 70, 86, and 87 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Eddy et al. (US Pat. No. 6,159,588) in view of Donnelley et al. (US Pat. No. 3,669,707).

Arguments

The Examiner states that Eddy et al. teach a fuser member having a base, and a fusing surface layer comprising a fluoroelastomer and filler particles with a modulus greater than the modulus of the fluoroelastomer. The filler is made of aluminum with a mean particle diameter of about 1 to 100 microns. While the Examiner acknowledges Eddy et al. do not teach polytetrafluoroethylene filler particles, the Examiner cites Donnelley et al as teaching use of plastic filler particles such as polytetrafluoroethylene comprising from about 0.1 to about 20 weight percent , and concludes that "It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Eddy et al. with plastic filler particles such as polytetrafluoroethylene, in light of the teachings of Donnelley et al., in order to reduce offset and mechanical breakdown as suggested by Donnelley et al." Regarding the present invention claimed requirement that the polytetrafluoroethylene filler particles are "in at least the minimum proportion by

volume of the fusing surface layer, and with at least the minimum mean particle diameter, so that, in fusing toner to substrate, the fuser member generates an image having a gloss number of about 5 or less", the Examiner states that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art, and that if the prior art structure is capable of performing the intended use, then it meets the claim.

The rejection of claims 64, 65, 69, 70, 86, and 87 represents clear error. Pending independent claim 64 is directed towards a fuser member for a toner fusing system or process comprising a fusing surface layer comprising (i) a fluoroelastomer and (ii) polytetrafluoroethylene filler particles with a mean particle diameter of at least about 50 microns. As shown in Table 2 of the instant application, it has been demonstrated in Examples 5 and 6 that superior gloss and contamination numbers result for use of such relatively large particulate polytetrafluoroethylene filler particles dispersed in a fluoroelastomer layer when compared to use of relatively smaller inorganic particulate filler employed in Examples 1 and 2, similar to the use of alumina particles disclosed in Eddy et al.. This unexpected result is clearly not shown, taught or mentioned in Eddy et al. Eddy et al., in fact, does not in any way teach or suggest the use of such particulate polytetrafluoroethylene particles dispersed in a fluoroelastomer surface layer, but rather only suggests polytetrafluoroethylene and fluoroelastomers as alternative fluoroplastics for use in the outer fusing layer of the fuser member thereof (see, e.g., col. 5, lines 15-60). Thus, Eddy et al clearly does not suggest use of polytetrafluoroethylene particles of the claimed size for use in a fluoroelastomer layer to provide the gloss advantage taught by applicants.

Donnelly et al does not overcome such basic deficiency of Eddy et al, as rather than teach the use of relatively large mean particle diameter polytetrafluoroethylene particles for any reason (and further, not so as to enable a gloss advantage) when using a fuser element comprising a fluoroelastomer surface layer as taught in the present invention, Donnelly et al only suggests the use of Teflon for reinforcing silicone elastomer fusing blankets. Donnelley further specifically teaches that the Teflon and silicone elastomer are mixed under high

shear so as to result in threads or fibers of Teflon being formed to provide a fiber structure within the silicone elastomer. It is taught at col. 5, lines 55-70, e.g., that the critical reinforcing effect is only obtained where the Teflon and silicone elastomer are thoroughly intermixed by milling, and that the desired reinforcing properties are not obtained by simply mixing the fluorocarbon resin with a silicone gum without milling. The present invention, on the other hand, clearly teaches in paragraph [0135] that in order to retain the particle size of polytetrafluoroethylene particles as employed in the invention, they are not dry compounded with the fluoroelastomer. Thus, the teachings of Donnelley et al clearly would not result in the use of polytetrafluoroethylene particles with at least the minimum mean particle diameter so that in fusing toner to substrate, the fuser member generates an image having a gloss number of about 5 or less as required by the present claimed invention. The resulting gloss number limitation is accordingly not merely an "intended use" limitation with no structural requirement, but rather relates to a structural difference between the particles employed in the present invention (which are described as not to be dry compounded with the fluoroelastomer in order to retain the desired particle size as explained above) and those of Donnelley et al (where the described reinforcing effect is described as only being obtained where the Teflon and silicone elastomer are intermixed by milling to provide a fiber structure within the silicone elastomer), as a result of the method of incorporation employed. Thus, the claimed invention is clearly patentably distinguished over the teachings of Eddy et al and Donnelly et al., as Applicants have taught that the required particle size of the polytetrafluoroethylene particles to obtain the desired claimed low gloss values upon fusing would not be retained when incorporating polytetrafluoroethylene particles in a manner essentially as taught as being required by Donnelley et al.

The particles as employed in the present invention and that of Donnelly are thus clearly distinct, and even if one were to disregard the fact that Donnelly is directed specifically towards silicone elastomer layers, the present invention would not be obtained when combining the actual teachings of Donnelly and Eddy, as there is no support for the Examiner's statement that Donnelly et al teaches that it is well known to add plastic filler such as polytetrafluoroethylene

with specified sizes to an elastomer layer, especially in a manner that would retain the particles in a size sufficient to provide the designated gloss values upon fusing.. The Examiner has entirely failed to address the contradictory teachings of the present invention and Donnelly et al. Thus, the claimed invention (directed towards the use of relatively large polytetrafluoroethylene particles in a fluoroelastomer layer to provide gloss advantages) is clearly not taught or suggested by Eddy et al in view of Donnelly et al (directed towards Teflon fibers or strands in a silicone elastomer layer to reinforce the silicone elastomer), as incorporation of polytetrafluoroethylene particles into the fuser member of Eddy et al based on the teachings of Donnelley et al (and thus in the manner taught by Donnelley et al which is required to obtain the features sought by Donnelley et al.) simply would not result in the present claimed invention. A prima facie case of obvious has accordingly clearly not been established, and reversal of this rejection upon review is respectfully urged.

The Examiner has further not addressed the unexpected showing of the instant application, as shown in Table 2 for Examples 5 and 6 that superior gloss and contamination numbers result for use of such relatively large particulate polytetrafluoroethylene filler particles dispersed in a fluoroelastomer layer when compared to use of relatively smaller inorganic particulate filler employed in Examples 1 and 2, similar to the use of alumina particles disclosed in Eddy et al.. Thus, even to the extent a prima facie case of obviousness may be alleged, the unexpected showing clearly rebuts such alleged case of prima facie obviousness.

Finally, each of Eddy, Donnelly and the present invention employ different combinations of materials and elements to provide different effects, and the proposed modifications of the Eddy et al and Donnelly et al references as proposed by the Examiner would in fact defeat the basic purpose of the individual references (i.e., Eddy et al is specifically directed towards use of alumina filler particles, while Donnelly et al is specifically directed towards silicone elastomer layer). It is accordingly clear that the proposed combination of the applied references clearly does not establish a prima facie case of obviousness, and that rather the proposed combination is arrived at only with the improper application of hindsight based on applicants' own teachings.

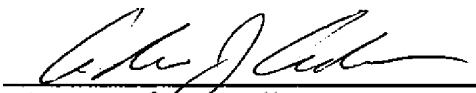
Summary

The Examiner has failed to establish a prima facie case of obviousness in view of the actual teachings of the applied references. Further, the Examiner has failed to adequately consider all claim requirements, and the showing of superior results obtained in accordance with the claimed invention which would not have been suggested by the applied references. Reversal of the rejection of claims 64, 65, 69, 70, 86 and 87 is accordingly respectfully urged.

Conclusion

For the above reasons, Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the rejection by the Examiner and mandate the allowance of Claims 64, 65, 69, 70, 86 and 87.

Respectfully submitted,



Andrew J. Anderson/rgd
Telephone: (585) 722-9662
Facsimile: (585) 477-1148

Attorney for Appellants
Registration No. 33,564

Enclosures

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.

Appendix I - Claims on Appeal

64. A fuser member for a toner fusing system or process comprising:

(a) a base; and

(b) a fusing surface layer comprising:

(i) a fluoroelastomer; and

(ii) filler particles comprising polytetrafluoroethylene filler particles, with a modulus greater than the modulus of the fluoroelastomer at the fusing temperature, and with a mean particle diameter of at least about 50 microns, in at least the minimum proportion by volume of the fusing surface layer, and with at least the minimum mean particle diameter, so that, in fusing toner to substrate, the fuser member generates an image having a gloss number of about 5 or less.

65. The fuser member of claim 64, wherein the filler particles, with a modulus greater than the modulus of the fluoroelastomer of at the fusing temperature, and with a mean particle diameter of at least about 50 microns, comprise at least the minimum proportion by volume of the fusing surface layer, and have at least the minimum mean particle diameter, which provide the fusing surface layer with an equilibrium surface roughness so that, in fusing toner to substrate, the fuser member, at the equilibrium surface roughness, generates an image having a gloss number of about 5 or less.

69. The fuser member of claim 65, wherein the filler particles, with a modulus greater than the modulus of the fluoroelastomer at the fusing temperature, comprise from about 10 percent by volume to about 40 percent by volume of the fusing surface layer.

70. The fuser member of claim 65, wherein the filler particles, with a modulus greater than the modulus of the fluoroelastomer at the fusing temperature, comprise from about 8 percent by volume to about 35 percent by volume of the fusing surface layer, and have a mean particle diameter greater than about 55 microns.

86. The fuser member of claim 64, wherein the plastic filler particles, with a modulus greater than the modulus of the fluoroelastomer at the fusing temperature, comprise from about 10 percent by volume to about 40 percent by volume of the fusing surface layer.

87. The fuser member of claim 64, wherein the plastic filler particles, with a modulus greater than the modulus of the fluoroelastomer at the fusing temperature, comprise at least about 12 percent by volume of the fusing surface layer.

Appendix II - Evidence

None

Appendix III – Related Proceedings

None